

REMARKS

Claim 1 has been amended. A Substitute Abstract has been attached.

Applicant has carefully considered the rejection in the claims under 37 CFR 102(b) as being anticipated by Reinhold. It is submitted that Reinhold does not disclose or suggest the combination claimed in claim 1 and the dependent claims.

Similar to Applicant, Reinhold discloses a cathode and a cap shaped grid 15. Reinhold shows a perforated disk anode 17 adjacent the end cap. The anode accelerates the electrons emitted by the cathode and focuses the electrons at point 18. As the electrons diverge from the point 18 they are again brought to focus by a focusing coil 21. They focus that a spot 22 of extremely small area, smaller than the area encompassed by the focal point 18. The electrons which strike the target 23 cause x-rays to be emanated. The x-rays fan outwardly from the axis 28.

In contrast Applicant's target 11 serves as the accelerating anode to accelerate the electrons. The electrons strike the target over a wide area. The focal point of the electron beam is actually at the aperture 16 of diaphragm 15. The x-rays which leave the target 11 are focused at the aperture. This is an entirely different mode of operation and provides a vast improvement over Reinhold. In Reinhold, the focused electron beam which hits the target form microholes 31 to a point where they penetrate the target at which a re-positioning of the target is required. In Applicants construction the electron beam strikes the large area of the target reducing the heat concentration at the target.

Claim 1 clearly distinguishes in calling for the anode positioned before the focus of the electron beam along the electron beam path and wherein the device shaping the x-ray aeration is the diaphragm at the center of the focus of the electron beam. Reinhold does not show or shaping of an x-ray beam by a diaphragm. The target is not at the focus at the electron beam. Thus the claim is clearly not anticipated by the cited prior art.

Based on the foregoing, Applicants respectfully submit that claims 1 - 7 are in condition for allowance and such is respectfully requested.

The Commissioner is authorized to charge the required fees, or credit any overpayment, to Dorsey & Whitney LLP Deposit Account No. 50-2319 (Order No. 33757/AJT (473525-2)).

Respectfully submitted,


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